Abstract: This paper considers the problem of analyzing data which arises by aggregating the original individual-level variables to separate groups knowing only averages of the original values and numbers of units, that the groups are based on. It is a problem of insufficient amount of information, which causes inaccurate determination of the relations between the original variables. This work aims to make reader familiar with a detailed impact of data aggregation, introduce the possibility of approaching the problem and introduce such models and assumptions that will lead to well established relationships among the original variables. Finally we show the practical use of different approaches to a real data. Calculations are performed in R software.